

Reinforced Concrete Design to EC2

Query on sign convention – Chapter 3

The “confusion” lies in the different sign conventions being used for the different parts of the calculations:

- (i) For the moment distribution calculations and calculating internal end-span bending moments anti-clockwise moments have been taken as positive and clockwise as negative
- (ii) For calculating reaction / shears and taking moments of forces acting on parts of the structure then clockwise moments are taken as positive and anti-clockwise as negative. i.e the sign convention is reversed so the signs of the moments from (i) have to be reversed to use in (ii)

Rather than using the general formula derived from figure 3.4 it is better to draw the free body diagram of the relevant part of the structure and use that as the basis of calculation and to better understand what is going on.

See attached calculations as an illustration.